

Appl. No. : 10/685,761
Filed : October 15, 2003

AMENDMENTS TO THE SPECIFICATION

At page 1, line 1 please insert the following:

Priority Information

This application is a continuation of U.S. Patent Application Serial No. 09/772,605, filed on Jan. 30, 2001, which is a continuation-in-part of U.S. Patent Application Serial No. 09/137,335, filed Aug. 20, 1998, now U.S. Patent No. 6,187,000 issued Feb. 13, 2001.

At page 4, line 1 please insert the following:

FIG. 2A is a side view of the cannula of FIG. 2 illustrating the cannula in the released condition;

FIG. 2B is a side view of the cannula of FIG. 2 with an expansion tool inserted into the cannula, the tool and the cannula being illustrated in an expanded condition;

FIG. 2C is a schematic bottom view of the structures of FIG. 2B showing an expanded condition of the cannula; and

FIG. 2D is a schematic bottom view of the structures of Fig. 2B showing how a completely expanded condition is achieved using the expansion tool.

Please amend the paragraph starting at page 2, line 4 as set forth below:

The present invention is a cannula for receiving surgical instruments for performing a surgical procedure on a body. ~~[[The]]~~**In one embodiment, the** cannula comprises a tube structure defining a passage through which the surgical instruments are inserted into the body. The tube structure has a proximal end and a distal end. The tube structure includes an expandable portion for enabling an increase in the cross-sectional area of the passage at least at the distal end.

Please amend the paragraph starting at page 7, line 3 as set forth below:

A guide pin 90 is attached to the inner surface 70 of the second tubular portion 40 adjacent the intersection of the second arcuate edge 46 and the second planar edge 50. In the tubular configuration of the second tubular portion 40, the

guide pin 90 is located in the arcuate slot 80 and is movable along the curvilinear path of the arcuate slot. A washer 92 is secured to an inner end of the guide pin 90 to retain the guide pin in the arcuate slot 80.

Please amend the paragraph starting at page 7, line 12 as set forth below:

The second tubular portion 40 of the tubular structure 12 is expandable from a contracted condition shown in Fig. 2 to an expanded condition shown in Fig. 1. In the contracted condition, the guide pin 90 is located in the first terminal end 82 of the arcuate slot 80 in the second tubular portion 40 and the second passage portion 74 defined by the second tubular portion is cylindrical in shape. The second passage 74 has a generally constant diameter D2 (Figs. 2 and 3) which is approximately equal to the diameter D1 of the first tubular portion 20. Thus, the cross-section area of the second passage portion 74 at the second end 62 of the second tubular portion 40, which is a function of the diameter D2, is approximately the same as the cross-sectional area at the first end 60 of the second tubular portion and is approximately the same as the cross-sectional area of the first passage portion 30 in the first tubular portion 20.

Please amend the paragraph starting at page 8, line 6 as set forth below:

In the expanded condition, the guide pin 90 is located in the second terminal end 84 of the arcuate slot 80 in the second tubular portion 40 and the second tubular portion has a conical configuration. At the second end 62 of the second tubular portion 40, the second passage portion 74 has a diameter D3 (FIG. 3) which is larger ~~then~~ than the diameter D2 of the second passage portion at the first end 60. Preferably, the diameter D3 of the second passage portion 74 at the second end 62 of the second tubular portion 40 is 40% to 80% greater than the diameter ~~[[D1]]~~ D2 of the second passage portion at the first end 60. Thus, in the expanded condition, the cross-sectional area of the second passage portion 74 at the second end 62 of the second tubular portion 40, which is a function of the diameter D3, is 40% to 80% greater than the cross-sectional area of the second passage portion at the first end 60 of the second tubular portion.

Please amend the paragraph starting at page 9, line 12 to read as follows:

In addition, a loop of nylon string 104 for tearing the heat ~~shrunk~~ shrink tubing 102 is wrapped around the heat ~~shrunk~~ shrink tubing so that it extends both underneath and on top of the tubing. An outer end 106 of the string 104 extends beyond the tubing 102.

Please amend the paragraph starting at page 10, line 9 to read as follows:

During an endoscopic surgical procedure, the cannula 10 is inserted in the contracted condition (FIG. 2) into the body of a patient ~~in the contracted condition~~. The outer end 106 of the string 104 is then manually pulled on by the surgeon. Pulling on the string 104 tears the heat ~~shrunk~~ shrink tubing 102 which is then removed from the cannula 10 by the surgeon. With the heat shrink tubing 102 removed, the second tubular portion 40 of the cannula 10 is thereby released for expansion toward the expanded condition (FIG. 2A).

Please amend the paragraph starting at page 10, line 19 to read as follows:

Next, the expansion tool 112 is inserted into the passage 16 in the cannula 10 until the frustoconical end section 114 is located at the second end 62 of the second tubular portion 40. The legs ~~[[114]]~~ 118 of the expansion tool 112 are manually separated, causing the frustoconical halves 118 to separate also (FIG. 2B). As the halves 118 separate, a radially ~~outward~~ outwardly directed force F is exerted on the inner surface 70 of the second tubular portion 40 by the halves 118, causing the second tubular portion to expand toward ~~[[the]]~~ an expanded condition (FIG. 2C). Under the force F of the expanding expansion tool 112, the guide pin 90 slides from the first terminal end 82 of the arcuate slot 80 ~~[[to]]~~ toward the second terminal end 84 of the arcuate slot to permit the expansion of the second tubular portion 40. The expansion tool 112 can be rotated about the axis 14 (FIG. 2D) to ensure that the second tubular portion 40 of the cannula 10 is completely expanded to the completely expanded condition (FIG. 3). The expansion tool 112 is then collapsed and removed so that one or more surgical instruments (indicated schematically at 120 in Fig. 5) and a viewing element can be received through the cannula 10 and inserted into a patient's body 130. The expandable

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second tubular portion 40 of the cannula 10 provides a significantly larger working area for the surgeon inside the body 130 within the confines of the cannula.